

30334

Work Order ID 159419

Tuesday, April 11, 2017 9:03:21 AM

159419

Page 1

Item ID: 647.8512

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Insert

Start Date: 4/12/2017 Start Qty: 2.00

Cust Item ID:

Required Date: 4/12/2017 Req'd Qty: 2.00

Customer:

Reference: SCHEDULED

Approvals:

Process Plan:

Date:

APR 11 2017

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

647.8500

N/C

100

0.00

100

DOOSAN LATHE

Doosan

Memo

0.34

Doosan Lathe

1-Turn as per Folio FB513 & Dwg 647.8500

Folio Rev: 46Dwg Rev: N/C

2-Deburr

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.04

Quality Control

DAS
45 18-4-13
9.89DAS
45 18-4-1
9.89

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Tuesday, April 11, 2017 9:03:21 AM

159419

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Insert

Start Date: 4/12/2017 **Start Qty:** 2.00

?

Cust Item ID:

Required Date: 4/12/2017 **Req'd Qty:** 2.00

?

Customer:

Reference: SCHEDULED

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC8- Inspect parts - second check

0.00

120

QC

Memo

0.04

Quality Control

122

0.00

122

Outsource6

Memo

0.00

Outsource process - Electrochemical

ISSUE PO: 36054
POSSIBLE SUPPLIER: GROUPE ALTECH

12

12 APR 24 2017

Qx SP17-5-1

123

Receive & Inspect for Damage & Mat'l Certs

0.00

123

Packaging

Memo

0.00

Packaging

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____

Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

Work Order ID 159419

Tuesday, April 11, 2017 9:03:21 AM

159419

Page 3

Item ID: 647.8512

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Insert

Start Date: 4/12/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/12/2017 Req'd Qty: 2.00

2

Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
124	QC3- Inspect Part Finish	0.00							AS 38 -89
124						12			
QC	Memo	0.00							
Quality Control									MAY 02 2017
130	Identify as per dwg & Stock Location: <u>CK176</u>	0.00							
130									
Packaging	Memo	0.20							DAS 8 -89
Packaging	LOCATION: WA001								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.02							
Quality Control									17/5/8 J

DAS
21
9-89

MAY 04 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____

Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							

Picklist Print

Tuesday, April 11, 2017 9:03:24 AM

Page 1

Work Order ID: 159419

159419

Parent Item: 647.8512

647 8512

Parent Item Name: Insert

Start Date: 4/12/2017

Required Date: 4/12/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 16-11-09 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R0.750		Purchased		No		100	f	82.2740	0.05	0.111111			

M303R0 750

303 Round Bar 0.750

Location

Loc Qty

Loc Code

MAT028

82.274

M136790

22.274

M137041

12

M137043

12

M137263

36

500

DAS
45
89

78-4-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

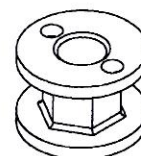
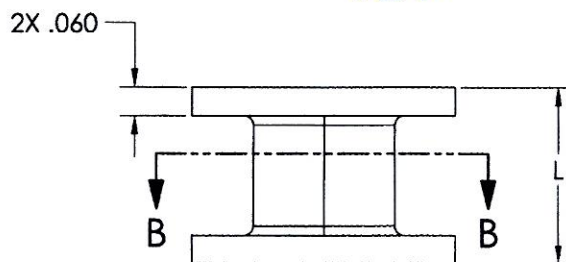
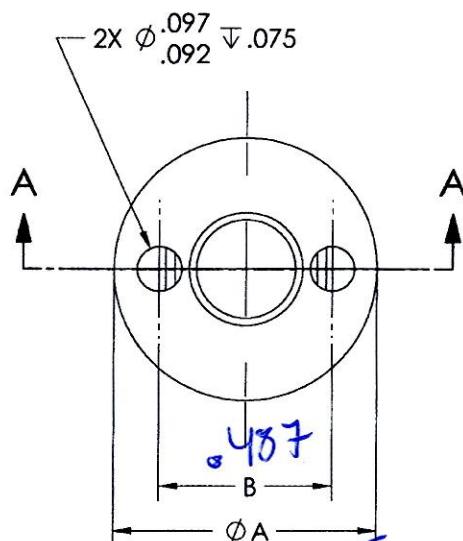
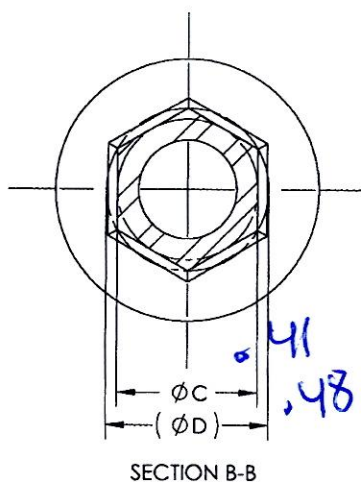
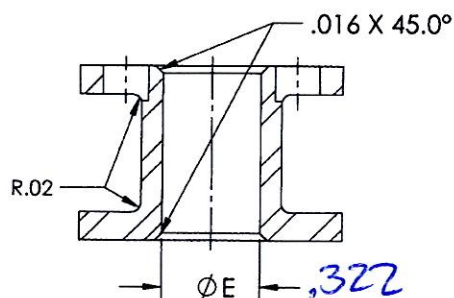
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

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NOTES:

1. MATERIAL: 303 SERIES STAINLESS STEEL IAW AMS-5640 TYPE 1
2. FINISH: PASSIVATE PER MIL-S-5002 TYPE 6
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120



647.8510
647.8511 SHOWN
647.8512

PART #	SIZE	ØA +.000 -.010	B	ØC	ØD	ØE	L
647.8510	3	.560	.367	.30	.35	.210	.283
647.8511	3	.560	.367	.30	.35	.210	.374
647.8512	5	.685	.487	.41	.48	.322	.283

NO. 159419
WORK ORDER
WITHOUT NOTICE
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY

NEXT ASSY (S)		ORIGINAL DATE 01/11/10	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY J. JACKSON	CHECKED D. BARTER	INSERT		
DRAWING APPROVAL P. BAYO		REV B 07/02/06	REV N/C	
CONTRACT NO.		SCALE: NONE		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ±.5°		SHEET 1 OF 1		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
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				OTHER : _____							



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36054**

Purchase Order Date 4/24/2017

PO Print Date 4/24/2017

Page Number 3 of 4

Order From : VC-ALT01
GROUP ALTECH
2455 HALPERN
ST LAURENT, MONTREAL H4S 1N9

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	514-335-3666	Customer POID	
		Customer Tax #	10127-2607
Ship To Contact		Terms	Net 30
Ship To Phone		Currency	CAD
Ship Via:	FedEx Overnight collect	FOB	FOB Origin
Ship Acct:			

6	159807	647.2511 NUT	5/2/2017	13.00	\$2.22	\$28.89
			Yes			
			5/2/2017			

FINISH: PASSIVATE PER MIL-S-5002 TYPE 6

Line Total: \$28.89

7	159419	647.8512 INSERT	5/2/2017	12.00	\$2.22	\$26.67
			Yes			
			5/2/2017			

FINISH: PASSIVATE PER MIL-S-5002 TYPE 6

Line Total: \$26.67

8	71401-45	PROCUREMENT QUALITY CLAUSES	5/2/2017	1.00	\$0.00	\$0.00
			No			
			5/2/2017			

Procurement Quality Clauses
A004 FAA-PMA /TSO
A005 RIGHT OF ENTRY
A016 PERSONNEL QUALIFICATION
A024 PROCESS CERTIFICATIONS
A025 CERTIFICATE OF CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

Note:

4/24/2017



2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.:(514)335-3666 Fax.:(514)335-3868
Internet : www.groupealtech.com

Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance

Bon-Livraison / Pk.Slip # : 126890-1 28/04/2017
Bon-Commande. / W.Order # : 126890
Client P.O. # : 36054
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	<u>No. Job</u> <u>No. Réf</u>	<u>NoSerie / Part Number</u> <u>Nom Produit / Product</u>	<u>Traitement</u> <u>Process</u>	<u>Poids</u> <u>Weight</u>	<u>Qté</u> <u>Qty</u>	<u>Envoyé</u> <u>Sent</u>	<u>A venir</u> <u>BO</u>
1	UNIT	647.7703 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1 + HYDROGEN ENBRITALMENT RELIEF (BAKE)	0.00	7	7	0
2	UNIT	647.7703 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1 + HYDROGEN ENBRITALMENT RELIEF (BAKE)	0.00	6	6	0
3	UNIT	646.3912 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO EMBRITAL RELIEF	0.00	24	24	0
4	UNIT	646.3912 Rev.	CADMIUM QQ-P-416F TY:2 CL:2 + HYDRO EMBRITAL RELIEF	0.00	20	20	0
5	UNIT	647.8510 Rev.	PASSIVATION PER QQ-P-35	0.00	20	20	0
6	UNIT	647.2511 Rev.	PASSIVATION PER AMS 2700	0.00	13	13	0
7	UNIT	647.8512 Rev.	PASSIVATION PER AMS 2700	0.00	12	12	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements
Our financial and legal responsibility will not be higher than the amount of invoice.